

ROSA UNIT #267A
BASIN FRUITLAND COAL

Surface Location:

1150' FNL and 30' FWL
NW/4 NW/4 Sec 28(D), T31N, R5W
Rio Arriba, NM

Spud: 05/27/05

Completed: 07/14/05

1st Delivered: 07/22/05

Bottom Hole Location:

988' FNL and 985' FWL

NW/4 NW/4 Sec 28(D), T31N, R5W
Rio Arriba, NM

Elevation: 6425' GR

API # 30-039-29519

Top	MD Depth	TVD Depth
Ojo Alamo	2772'	2592'
Kirtland	2878'	2692'
Fruitland	3302'	3107'
Base of Coal	3503'	3307'

7 jts 9-5/8", 36#, K-55, LT&C @ 320'.

74 jts 7", 20#, K-55, LTC @ 3365'. Float insert @ 3322'.

Liner top @ 3342'

108 jts of 2-7/8", 6.5#, J-55 tbgs @ 3534' as follows: 1/2" mule shoe, expendable check, 1 jt tbgs, SN @ 3499', 107 jts tbgs.

7 jts 5-1/2", 17#, N-80 @ 3342' - 3610'.

0.43", 4SPF
296 holes total



3390' - 3412'

3436 - 3456'

3480' - 3512'

Open hole from 6-1/4" to 9-1/2"
from 3375' to 3610'

TD @ 3610' MD

Hole Size	Casing	Cement	Volume	Top of Cmt
12-1/4"	9-5/8", 36#	160 sx	224 cu. Ft.	Surface
8-3/4"	7", 20#	550 sx	1125 cu. Ft.	Surface
6-1/4"	5-1/2", 17#	Did Not Cmt		



End of Well Report

Rosa Unit # 267-A

Williams Production Company

6/2/2005

HALLIBURTON

9800 W RENO • OKLA CITY, OK 73127
PHONE 405.324.2222 • FAX 405.324.1009

June 03, 2005



Re: Williams Production Co.
Rosa Unit #267-A
Sec. 28-T31N-R05W
Rio Arriba County, New Mexico

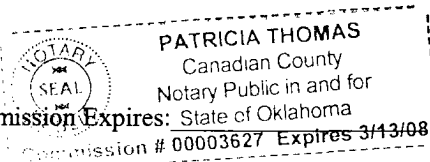
Enclosed please find the original and one copy of the surveys performed on the referenced well by Halliburton/Sperry Drilling Services.

<u>Name & Title of Supervisor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Dennis Cook Field Supervisor	Original	349' – 3,318'	05/28/05 – 06/01/05	MWD
Dennis Cook Field Supervisor	Projection to TD	3, 318' – 3,368'		MWD

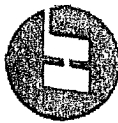
If any other information is required, please contact the undersigned at the letterhead address and phone number.

Dennis Cook
Field Supervisor

My Commission Expires: State of Oklahoma
Commission # 00003627 Expires 3/13/08



Patricia Thomas
Notary Public



**Williams Production Company
New Mexico
Rio Arriba County
Sec 28-T31N-R05W
Rosa Unit #267-A - MWD Survey**

Halliburton Sperry-Drilling Survey Report

2 June, 2005

Surface Coordinates: 2137981.70 N, 633734.97 E (36° 52' 29.0000" N, 107° 22' 34.0000" W)
Grid Coordinate System: NAD27 New Mexico State Planes, Western Zone

Surface Coordinates relative to Global Coordinates: 632990.57 N, 336054.21 E (Grid)
Surface Coordinates relative to Structure: 1150.00 S, 30.00 E (True)
Kelly Bushing Elevation: 6437.00ft above Mean Sea Level
Kelly Bushing Elevation: 6437.00ft above Structure

Survey Ref: svy8525

HALLIBURTON

Sperry Drilling Services

HALLIBURTON**Sperry Drilling Services****Williams Production Company**

New Mexico

Rio Arriba County

Survey Report for Sec 28-T31N-R05W - Rosa Unit #267-A - MWD Survey

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates		Dogleg Severit (°/100ft)	Lease Calls		Global Coordinates	
					N-S (ft)	E-W (ft)		FNL-FSL (ft)	FEL-FWL (ft)	Grid Y (ft)	Grid X (ft)
0.00	0.000	0.000	0.00	0.00	0.00 N	0.00 E		1150.00 FNL	30.00 FWL	2137981.70 N	633734.97 E
349.00	0.260	229.190	349.00	-0.68	0.52 S	0.60 W	0.07	1150.52 FNL	29.40 FWL	2137981.18 N	633734.38 E
379.00	0.620	152.900	379.00	-0.69	0.71 S	0.58 W	2.04	1150.70 FNL	29.42 FWL	2137980.99 N	633734.40 E
410.00	0.700	136.660	410.00	-0.53	0.99 S	0.37 W	0.65	1150.99 FNL	29.63 FWL	2137980.70 N	633734.61 E
441.00	1.280	116.890	440.99	-0.14	1.29 S	0.07 E	2.14	1151.29 FNL	30.07 FWL	2137980.41 N	633735.05 E
472.00	1.940	103.950	471.98	0.62	1.57 S	0.89 E	2.42	1151.57 FNL	30.88 FWL	2137980.13 N	633735.87 E
503.00	2.940	105.110	502.95	1.82	1.90 S	2.16 E	3.23	1151.90 FNL	32.16 FWL	2137979.80 N	633737.15 E
534.00	3.770	97.740	533.90	3.52	2.25 S	3.94 E	3.01	1152.25 FNL	33.94 FWL	2137979.47 N	633738.92 E
565.00	4.370	93.740	564.82	5.64	2.46 S	6.13 E	2.14	1152.46 FNL	36.13 FWL	2137979.26 N	633741.11 E
596.00	5.420	93.210	595.71	8.22	2.62 S	8.77 E	3.39	1152.62 FNL	38.77 FWL	2137979.12 N	633743.75 E
627.00	6.370	93.900	626.54	11.32	2.82 S	11.95 E	3.07	1152.82 FNL	41.94 FWL	2137978.93 N	633746.93 E
658.00	7.690	89.230	657.31	15.04	2.91 S	15.74 E	4.64	1152.91 FNL	45.73 FWL	2137978.86 N	633750.72 E
688.00	8.420	88.150	687.01	19.21	2.81 S	19.94 E	2.48	1152.81 FNL	49.94 FWL	2137978.98 N	633754.93 E
719.00	9.090	87.970	717.65	23.88	2.65 S	24.65 E	2.16	1152.65 FNL	54.65 FWL	2137979.16 N	633759.64 E
750.00	9.760	85.930	748.23	28.93	2.38 S	29.72 E	2.41	1152.38 FNL	59.72 FWL	2137979.46 N	633764.71 E
781.00	10.720	84.700	778.74	34.42	1.93 S	35.21 E	3.18	1151.92 FNL	65.21 FWL	2137979.94 N	633770.20 E
812.00	11.340	83.640	809.16	40.34	1.32 S	41.11 E	2.10	1151.32 FNL	71.11 FWL	2137980.57 N	633776.09 E
843.00	12.130	83.820	839.52	46.63	0.63 S	47.38 E	2.55	1150.63 FNL	77.38 FWL	2137981.29 N	633782.36 E
874.00	12.830	81.710	869.78	53.33	0.21 N	54.03 E	2.69	1149.79 FNL	84.02 FWL	2137982.17 N	633789.00 E
905.00	13.890	81.010	899.94	60.49	1.29 N	61.11 E	3.46	1148.71 FNL	91.10 FWL	2137983.28 N	633796.07 E
935.00	14.940	79.950	929.00	67.96	2.53 N	68.47 E	3.61	1147.47 FNL	98.47 FWL	2137984.55 N	633803.43 E
966.00	15.470	81.010	958.91	76.09	3.87 N	76.49 E	1.93	1146.13 FNL	106.49 FWL	2137985.94 N	633811.44 E
997.00	16.440	80.660	988.72	84.61	5.23 N	84.90 E	3.14	1144.77 FNL	114.90 FWL	2137987.33 N	633819.85 E
1028.00	17.310	81.010	1018.39	93.61	6.66 N	93.79 E	2.83	1143.34 FNL	123.78 FWL	2137988.81 N	633828.73 E
1059.00	18.190	80.300	1047.91	103.06	8.20 N	103.11 E	2.92	1141.80 FNL	133.11 FWL	2137990.39 N	633838.04 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
1090.00	19.160	80.300	1077.28	112.98	9.87 N	112.90 E	3.13	1140.13 FNL	142.89 FWL	2137992.11 N	633847.82 E
1121.00	20.130	79.780	1106.47	123.40	11.67 N	123.16 E	3.18	1138.32 FNL	153.16 FWL	2137993.96 N	633858.08 E
1152.00	21.450	79.600	1135.45	134.41	13.64 N	133.99 E	4.26	1136.35 FNL	163.98 FWL	2137995.98 N	633868.89 E
1183.00	22.240	79.780	1164.23	145.94	15.71 N	145.33 E	2.56	1134.29 FNL	175.33 FWL	2137998.10 N	633880.23 E
1213.00	23.290	80.480	1191.89	157.55	17.70 N	156.77 E	3.61	1132.30 FNL	186.77 FWL	2138000.14 N	633891.66 E
1276.00	25.660	78.720	1249.22	183.64	22.42 N	182.44 E	3.94	1127.57 FNL	212.43 FWL	2138005.00 N	633917.30 E
1307.00	26.190	78.190	1277.11	197.18	25.14 N	195.71 E	1.87	1124.86 FNL	225.71 FWL	2138007.77 N	633930.56 E
1370.00	27.070	79.070	1333.42	225.41	30.70 N	223.40 E	1.53	1119.30 FNL	253.39 FWL	2138013.47 N	633958.22 E
1432.00	27.950	78.720	1388.41	254.03	36.22 N	251.50 E	1.44	1113.78 FNL	281.50 FWL	2138019.12 N	633986.30 E
1495.00	27.860	77.670	1444.09	283.49	42.25 N	280.36 E	0.79	1107.75 FNL	310.36 FWL	2138025.29 N	634015.13 E
1559.00	27.690	77.490	1500.71	313.27	48.66 N	309.48 E	0.30	1101.33 FNL	339.48 FWL	2138031.84 N	634044.22 E
1621.00	27.860	77.490	1555.57	342.13	54.92 N	337.69 E	0.27	1095.08 FNL	367.69 FWL	2138038.24 N	634072.40 E
1684.00	27.950	77.320	1611.24	371.57	61.35 N	366.47 E	0.19	1088.65 FNL	396.46 FWL	2138044.80 N	634101.14 E
1715.00	28.120	77.140	1638.61	386.11	64.57 N	380.68 E	0.61	1085.43 FNL	410.67 FWL	2138048.09 N	634115.33 E
1747.00	27.600	78.020	1666.90	401.05	67.79 N	395.28 E	2.07	1082.21 FNL	425.28 FWL	2138051.38 N	634129.92 E
1778.00	26.980	78.370	1694.45	415.25	70.70 N	409.19 E	2.07	1079.30 FNL	439.19 FWL	2138054.35 N	634143.82 E
1809.00	26.720	79.070	1722.10	429.24	73.44 N	422.92 E	1.32	1076.56 FNL	452.92 FWL	2138057.16 N	634157.54 E
1871.00	25.840	81.360	1777.70	456.69	78.11 N	449.97 E	2.17	1071.89 FNL	479.96 FWL	2138061.96 N	634184.56 E
1934.00	26.680	82.070	1834.19	484.55	82.12 N	477.55 E	1.42	1067.87 FNL	507.55 FWL	2138066.11 N	634212.12 E
1996.00	27.690	80.690	1889.35	512.87	86.37 N	505.55 E	1.92	1063.62 FNL	535.55 FWL	2138070.49 N	634240.11 E
2060.00	27.600	80.830	1946.04	542.57	91.14 N	534.86 E	0.17	1058.86 FNL	564.86 FWL	2138075.40 N	634269.39 E
2123.00	27.330	81.710	2001.94	571.62	95.55 N	563.58 E	0.77	1054.44 FNL	593.58 FWL	2138079.95 N	634298.09 E
2187.00	27.950	81.530	2058.64	601.31	99.88 N	592.95 E	0.98	1050.12 FNL	622.95 FWL	2138084.42 N	634327.44 E
2218.00	28.300	81.360	2085.97	615.92	102.06 N	607.41 E	1.16	1047.94 FNL	637.40 FWL	2138086.66 N	634341.88 E
2249.00	27.860	81.530	2113.33	630.51	104.23 N	621.83 E	1.44	1045.77 FNL	651.83 FWL	2138088.90 N	634356.30 E
2279.00	27.510	81.180	2139.89	644.45	106.32 N	635.61 E	1.29	1043.68 FNL	665.61 FWL	2138091.06 N	634370.07 E
2311.00	27.420	79.780	2168.28	659.20	108.76 N	650.17 E	2.04	1041.24 FNL	680.17 FWL	2138093.57 N	634384.61 E
2343.00	27.600	78.550	2196.67	673.98	111.54 N	664.69 E	1.86	1038.46 FNL	694.68 FWL	2138096.42 N	634399.12 E
2374.00	26.540	78.190	2224.27	688.08	114.38 N	678.50 E	3.46	1035.61 FNL	708.50 FWL	2138099.33 N	634412.92 E
2405.00	25.350	78.290	2252.15	701.63	117.15 N	691.78 E	3.84	1032.85 FNL	721.78 FWL	2138102.16 N	634426.18 E

Measure Depth (ft)	Incl. Angle (Deg)	Drift Direction (Deg)	True Vertical Depth	Vertical Section (ft)	Local Coordinates N-S (ft)	E-W (ft)	Dogleg Severit (°/100ft)	Lease Calls FNL-FSL (ft)	FEL-FWL (ft)	Global Coordinates Grid Y (ft)	Grid X (ft)
2437.00	24.520	79.250	2281.16	715.11	119.78 N	705.01 E	2.89	1030.22 FNL	735.01 FWL	2138104.85 N	634439.40 E
2466.00	23.550	80.300	2307.65	726.92	121.88 N	716.64 E	3.66	1028.12 FNL	746.63 FWL	2138107.00 N	634451.02 E
2498.00	22.410	80.830	2337.11	739.41	123.93 N	728.96 E	3.62	1026.07 FNL	758.96 FWL	2138109.11 N	634463.33 E
2529.00	21.450	81.180	2365.86	750.99	125.74 N	740.39 E	3.13	1024.26 FNL	770.39 FWL	2138110.98 N	634474.76 E
2560.00	21.010	80.830	2394.76	762.22	127.49 N	751.48 E	1.48	1022.51 FNL	781.48 FWL	2138112.79 N	634485.84 E
2592.00	20.830	81.180	2424.65	773.64	129.28 N	762.77 E	0.68	1020.72 FNL	792.76 FWL	2138114.63 N	634497.11 E
2622.00	20.480	81.890	2452.72	784.22	130.84 N	773.23 E	1.43	1019.16 FNL	803.23 FWL	2138116.23 N	634507.57 E
2653.00	20.040	80.300	2481.81	794.96	132.50 N	783.84 E	2.27	1017.50 FNL	813.84 FWL	2138117.95 N	634518.17 E
2685.00	20.040	79.950	2511.87	805.92	134.38 N	794.64 E	0.37	1015.62 FNL	824.64 FWL	2138119.88 N	634528.96 E
2716.00	19.780	79.070	2541.01	816.48	136.30 N	805.02 E	1.28	1013.70 FNL	835.02 FWL	2138121.85 N	634539.33 E
2747.00	19.420	78.020	2570.22	826.87	138.36 N	815.21 E	1.62	1011.64 FNL	845.21 FWL	2138123.96 N	634549.51 E
2779.00	19.510	77.670	2600.39	837.52	140.61 N	825.64 E	0.46	1009.39 FNL	855.63 FWL	2138126.26 N	634559.93 E
2810.00	18.980	78.550	2629.66	847.73	142.71 N	835.64 E	1.95	1007.28 FNL	865.63 FWL	2138128.41 N	634569.92 E
2842.00	19.340	76.960	2659.88	858.22	144.94 N	845.90 E	1.98	1005.06 FNL	875.90 FWL	2138130.69 N	634580.17 E
2874.00	19.140	77.070	2690.10	868.74	147.31 N	856.17 E	0.64	1002.69 FNL	886.17 FWL	2138133.11 N	634590.43 E
2905.00	18.720	76.790	2719.42	878.78	149.59 N	865.97 E	1.39	1000.41 FNL	895.97 FWL	2138135.43 N	634600.22 E
2937.00	18.280	77.840	2749.77	888.92	151.82 N	875.87 E	1.72	998.18 FNL	905.87 FWL	2138137.71 N	634610.11 E
2968.00	17.490	78.720	2779.27	898.43	153.75 N	885.20 E	2.69	996.25 FNL	915.19 FWL	2138139.69 N	634619.42 E
3000.00	16.350	79.780	2809.88	907.74	155.49 N	894.34 E	3.69	994.51 FNL	924.34 FWL	2138141.47 N	634628.56 E
3031.00	15.030	80.130	2839.73	916.12	156.95 N	902.60 E	4.27	993.04 FNL	932.60 FWL	2138142.97 N	634636.81 E
3063.00	13.890	80.660	2870.71	924.11	158.29 N	910.48 E	3.59	991.71 FNL	940.47 FWL	2138144.35 N	634644.68 E
3095.00	12.920	81.710	2901.84	931.53	159.43 N	917.81 E	3.13	990.57 FNL	947.80 FWL	2138145.52 N	634652.01 E
3126.00	11.950	83.120	2932.11	938.20	160.31 N	924.42 E	3.28	989.69 FNL	954.42 FWL	2138146.44 N	634658.62 E
3157.00	10.900	84.000	2962.50	944.33	161.00 N	930.52 E	3.43	988.99 FNL	960.52 FWL	2138147.16 N	634664.72 E
3189.00	9.400	85.050	2994.00	949.96	161.55 N	936.14 E	4.72	988.45 FNL	966.13 FWL	2138147.72 N	634670.33 E
3221.00	7.910	86.630	3025.63	954.75	161.90 N	940.94 E	4.71	988.10 FNL	970.94 FWL	2138148.10 N	634675.13 E
3253.00	6.680	86.980	3057.37	958.79	162.13 N	945.00 E	3.85	987.87 FNL	974.99 FWL	2138148.35 N	634679.18 E
3284.00	5.320	89.470	3088.20	962.00	162.24 N	948.23 E	4.47	987.76 FNL	978.23 FWL	2138148.47 N	634682.42 E
last MWD survey											
3318.00	4.070	91.120	3122.09	964.75	162.23 N	951.02 E	3.70	987.77 FNL	981.01 FWL	2138148.48 N	634685.20 E
Projection to bit											
3368.00	4.070	91.120	3171.96	968.24	162.16 N	954.56 E	0.00	987.84 FNL	984.56 FWL	2138148.42 N	634688.75 E

HALLIBURTON

Sperry Drilling Services

Williams Production Company
New Mexico
Rio Arriba County

Survey Report for Sec 28-T31N-R05W - Rosa Unit #267-A - MWD Survey

All data is in Feet (US) unless otherwise stated. Directions and coordinates are relative to True North.
Vertical depths are relative to RKB(6425' ±12' KB). Northings and Eastings are relative to Wellhead.

Based upon Minimum Curvature type calculations, at a Measured Depth of 3368.00ft.,
The Bottom Hole Displacement is 968.24ft., in the Direction of 80.359° (True).

HALLIBURTON

Sperry Drilling Services

Williams Production Company
New Mexico
Rio Arriba County

Survey Report for Sec 28-T31N-R05W - Rosa Unit #267-A - MWD Survey

Comments

Measured Depth (ft)	Station Coordinates		Comment
	TVD (ft)	Northings (ft)	
3318.00	3122.09	162.23 N	951.02 E
3368.00	3171.96	162.16 N	954.56 E

last MWD survey
Projection to bit

North Reference Sheet for Sec 28-T31N-R05W - Rosa Unit #267-A

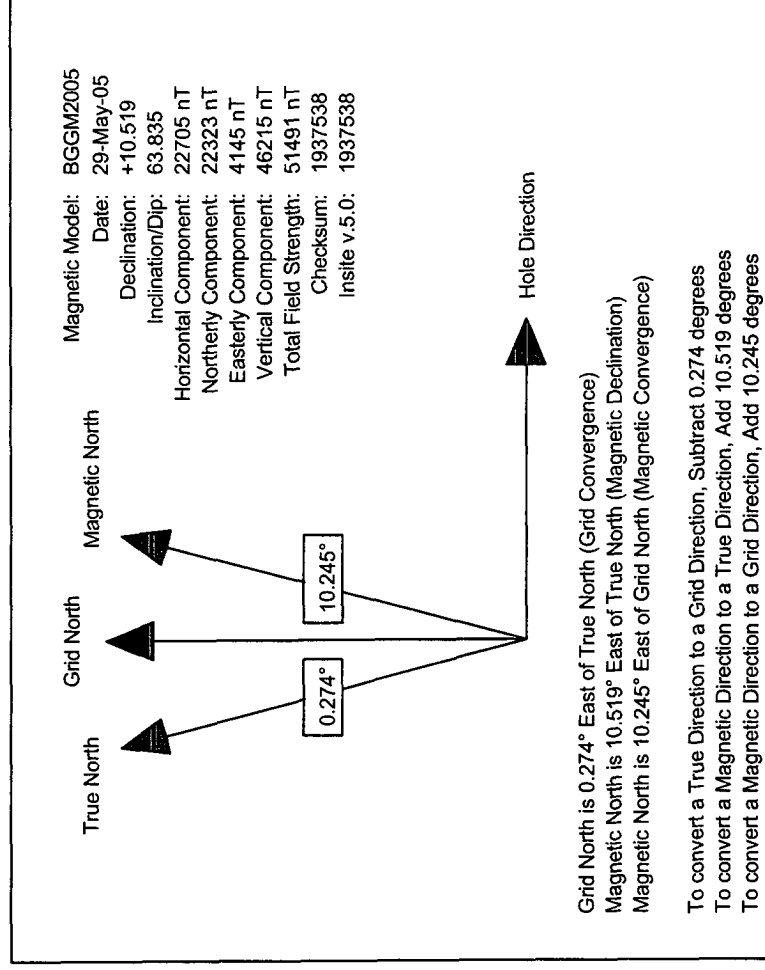
Coordinate System is NAD27 New Mexico State Planes, Western Zone, US Foot
Source: Snyder, J.P., 1987, Map Projections - A Working Manual

Datum is North American Datum of 1927 (US48, AK, HI, and Canada)

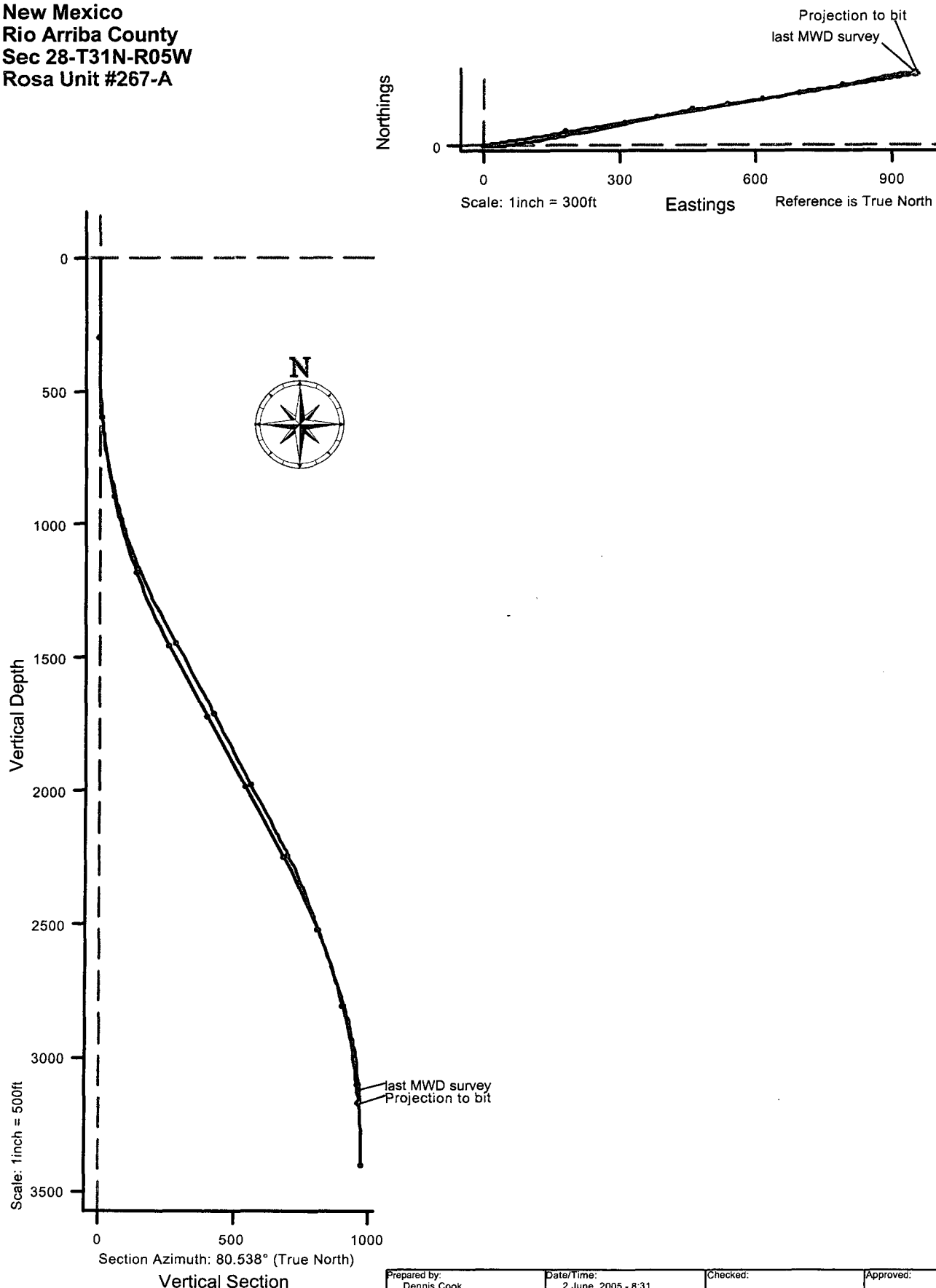
Spheroid is Clarke - 1866
Equatorial Radius: 6378206.400m.
Polar Radius: 6356583.800m.
Inverse Flattening: 294.978698213901

Projection method is Transverse Mercator or Gauss Kruger Projection
Central Meridian is -107.833°
Longitude Origin: 0.000°
Latitude Origin: 31.000°
False Easting: 152400.00m
False Northing: 0.00m
Scale Reduction: 0.99991667

Grid Coordinates of Well: 2137981.70 N, 633734.97 E
Geographical Coordinates of Well: 36° 52' 29.0000" N, 107° 22' 34.0000" W
Surface Elevation of Well: 6437.00ft
Grid Convergence at Surface is +0.274°
Magnetic Declination at Surface is +10.519° (29 May, 2005)



New Mexico
Rio Arriba County
Sec 28-T31N-R05W
Rosa Unit #267-A



District I
PO Box 1980, Hobbs, NM 88241-1980

District II
PO Drawer 00, Artesia, NM 88211-0719

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

Form C-102
Revised February 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number		*Pool Code 71629	*Pool Name BASIN FRUITLAND COAL
*Property Code 17033	*Property Name ROSA UNIT		*Well Number 267A
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6425'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot 1st	Feet from the	North/South line	Feet from the	East/West line	County
0	28	31N	5W		1150	NORTH	30	WEST	RIO ARriba

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot 1st	Feet from the	North/South line	Feet from the	East/West line	County
0	28	31N	5W		990	NORTH	990	WEST	RIO ARriba
¹² Dedicated Acres 320.0 Acres - (W/2)					¹³ Joint or Infill		¹⁴ Consolidation Code		¹⁵ Order No.

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

5286.60' N80°21.6'E 971.9' → ○ SURFACE LOCATION 1150' FNL 30' FNL ○ BOTTOM-HOLE LOCATION 990' FNL 990' FNL BHC 162.16N 954.56E 28 LEASE SF-078769 5286.60'		¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief Signature _____ Printed Name _____ Title _____ Date _____ ¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Survey Date: OCTOBER 5, 2004 Signature and Seal of Professional Surveyor  <u>JASON C. EDWARDS</u> Certificate Number 15269
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